

## **REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed December 1, 2004. Upon entry of the amendments in this response, claims 38 - 56 remain pending. In particular, Applicant has amended claims 38, 49 and 51 - 54. Specifically, Applicant has amended claim 1 to recite "slots, not completely piercing the heat spreader." Support this limitation can be found on page 7 of the application and FIG. 2, for example. Applicant submits that no new matter has been added. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **Objections to the Claims**

The Office Action indicates that several of the claims are objected to because of various informalities. As set forth above, Applicant has amended the claims and respectfully asserts that the objection has been accommodated.

### **Rejections under 35 U.S.C. 102**

The Office Action indicates that claims 38 and 49 - 56 are rejected under 35 U. S. C. 102(b) as being anticipated by *Dordi* (US 5,835,355). Applicant respectfully traverses the rejection.

In this regard, *Dordi* teaches a tape ball grid array package with a preformed metal stiffener. Specifically, the stiffener (heat spreader) 34 has a pattern of vent holes or openings 40 completely piercing the stiffener. (See Fig. 1).

With respect to claim 38, that claim has been amended to recite:

38. A ball grid array package, comprising:  
a semiconductor chip/die affixed to a ball grid substrate; the ball grid substrate having a series of balls; and  
a heat spreader mounted to the semiconductor chip/die and the ball grid substrate opposite the series of balls; *the heat spreader having a pattern of slots, not completely piercing the heat spreader, therein.*

*(Emphasis Added).*

Applicant respectfully asserts that the cited art is deficient for the purpose of anticipating claim 38. In particular, Applicant respectfully asserts that that cited art does not teach or otherwise disclose at least the limitations emphasized above in claim 38.

Applicant respectfully asserts that this limitation, *i.e.* the slots that do not completely pierce the heat spreader, potentially prevents the deleterious effects of moisture, for example, on the underlying super ball grid array chip. (*See* page 7, lines 6-8). Use of such a feature is not taught or reasonably suggested by any or a combination of the cited references. Therefore, Applicant respectfully asserts that claim 38 is in condition for allowance.

Since claims 39 - 56 are dependent claims that incorporate the limitations of claim 38, Applicant respectfully asserts that these claims also are in condition for allowance. Additionally, these claims recite other limitations that can serve as an independent basis for patentability.

### **Cited Art of Record**

The cited art of record has been considered, but is not believed to affect the patentability of the presently pending claims.

### **CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this Amendment and Response. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

By:

  
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